4th Basic

5th Advanced

Helping With Math

USA GRADES

Division of Proper Fractions

Suitable for students
aged 8-10

This pack is suitable for learners aged 8-10 years old or 4th and 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving division of proper fractions.

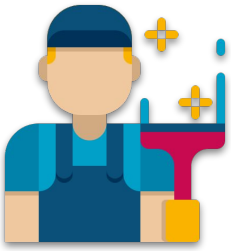
Hi! My name is Jessa. Help me clean the house after learning how to divide proper fractions.

Proper fraction is a type of fraction whose top number (numerator) is less than its bottom number (denominator).

$$\frac{2}{3} \div \frac{7}{9}$$

- **⅔** is the dividend or what we called the first fraction.
- **7/9** is the divisor or what we called the second fraction.

STEPS IN DIVIDING PROPER FRACTIONS



Let's try this! $\frac{5}{6} \div \frac{1}{3}$

STEP 1

Identify the first fraction (dividend) and the second fraction (divisor)

dividend $\frac{5}{6}$ divisor $\frac{1}{3}$

STEP 2

Reciprocate the second fraction or interchange the numerator and the denominator.

$\frac{1}{3} \rightarrow \frac{3}{1}$

STEP 3

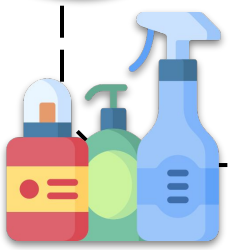
Multiply the first fraction to the reciprocated second fraction.

$$\frac{5}{6} \times \frac{3}{1} = \frac{15}{6}$$

STEP 3

Simplify if necessary.

$$\frac{15 \div 3}{6 \div 3} = \frac{5}{2}$$



DIVIDING PROPER FRACTIONS

EXAMPLES:

1.) $\frac{1}{9} \div \frac{2}{5}$

2.) $\frac{7}{8} \div \frac{1}{2}$

3.) $\frac{1}{3} \div \frac{8}{9}$

4.) $\frac{2}{7} \div \frac{4}{9}$

SOLUTIONS:

1.)

$$\frac{1}{9} \div \frac{2}{5}$$
$$= \frac{1}{9} \times \frac{5}{2}$$
$$= \frac{\mathbf{5}}{\mathbf{18}}$$

2.)

$$\frac{7}{8} \div \frac{1}{2}$$
$$= \frac{7}{8} \times \frac{2}{1}$$
$$= \frac{14}{8} = \frac{\mathbf{7}}{\mathbf{4}}$$

3.)

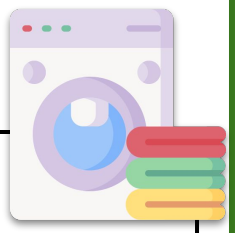
$$\frac{1}{3} \div \frac{8}{9}$$
$$= \frac{1}{3} \times \frac{9}{8}$$
$$= \frac{9}{24} = \frac{\mathbf{3}}{\mathbf{8}}$$

4.)

$$\frac{2}{7} \div \frac{4}{9}$$
$$= \frac{2}{7} \times \frac{9}{4}$$
$$= \frac{18}{28} = \frac{9}{14}$$

LET'S PRACTICE!

Find the quotient.



1.) $\frac{1}{2} \div \frac{2}{4}$

2.) $\frac{5}{6} \div \frac{3}{9}$

3.) $\frac{4}{9} \div \frac{1}{3}$

4.) $\frac{4}{6} \div \frac{2}{3}$

5.) $\frac{7}{9} \div \frac{2}{5}$

6.) $\frac{3}{4} \div \frac{1}{3}$

7.) $\frac{5}{8} \div \frac{2}{5}$

8.) $\frac{4}{7} \div \frac{2}{6}$

TABLE OF ACTIVITIES

ROOM CLEANING

G4 Basic

It's Saturday and you will clean your room. Find the cleaning tools that you can use below by answering the following. Show your solution on the space provided. Write the letter of your answer inside the circle.

1.) $\frac{3}{5} \div \frac{7}{8}$

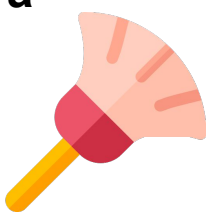
2.) $\frac{2}{5} \div \frac{4}{9}$

3.) $\frac{1}{6} \div \frac{1}{3}$

4.) $\frac{3}{4} \div \frac{1}{8}$

5.) $\frac{5}{7} \div \frac{1}{4}$

a

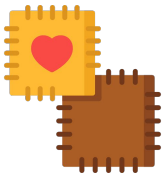


$\frac{1}{2}$

b

$\frac{20}{7}$

c



$\frac{24}{35}$

d

$\frac{9}{10}$

e

6

CLEANING DAY!

G4 Basic

It's cleaning day! Help me choose the cleaning tools related to the mentioned phrases on the left side by dividing the proper fractions below. Show your solution on the space provided.

1. $\frac{1}{2} \div \frac{3}{4} = \frac{\square}{\square}$

Dirty clothes

2. $\frac{3}{8} \div \frac{6}{7} = \frac{\square}{\square}$

Dirty dishes

3. $\frac{7}{8} \div \frac{4}{5} = \frac{\square}{\square}$

Cordon bleu

4. $\frac{1}{6} \div \frac{3}{8} = \frac{\square}{\square}$

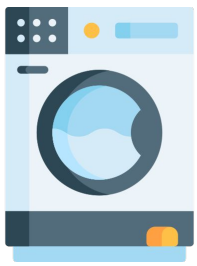
Slippery floor

5. $\frac{2}{3} \div \frac{1}{2} = \frac{\square}{\square}$

Dusty car seat

$\frac{35}{32}$

$\frac{4}{9}$



$\frac{2}{6}$

$\frac{7}{16}$

$\frac{4}{3}$

CLEANING APPLIANCES

G4 Basic

You and your mom went to the shopping mall to buy some appliances for your new house. Help her choose the appliances that will help her in cleaning by finding the quotient of the following fractions. Put a ✓ inside the box if it is a cleaning appliance, otherwise, put an *X* mark. Show your solution on the space provided.

1. $\frac{4}{6} \div \frac{3}{4}$

☐ $\frac{4}{8}$ 

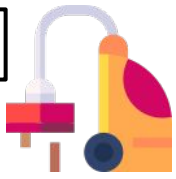
☐ $\frac{8}{9}$ 

2. $\frac{1}{2} \div \frac{2}{9}$

☐ $\frac{3}{4}$ 

☐ $\frac{9}{4}$ 

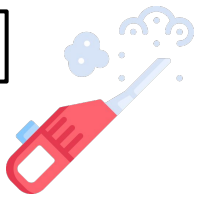
3. $\frac{1}{4} \div \frac{3}{5}$

☐ $\frac{5}{12}$ 

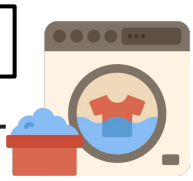
☐ $\frac{6}{7}$ 

4. $\frac{4}{7} \div \frac{2}{8}$

☐ $\frac{8}{14}$ 

☐ $\frac{16}{7}$ 

5. $\frac{1}{5} \div \frac{2}{7}$

☐ $\frac{7}{10}$ 

☐ $\frac{3}{8}$ 

PROPER SEGREGATION

G4 Basic

It is your everyday job to separate the biodegradable and non-biodegradable waste at home. To do that, answer the following. Show your solution on the space provided.

BIODEGRADABLE

1. $\frac{3}{7} \div \frac{2}{6}$

2. $\frac{1}{5} \div \frac{1}{3}$

3. $\frac{2}{7} \div \frac{3}{8}$

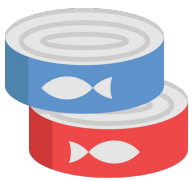
NON-BIODEGRADABLE

4. $\frac{5}{8} \div \frac{1}{2}$

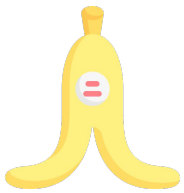
5. $\frac{4}{7} \div \frac{2}{6}$

6. $\frac{6}{8} \div \frac{1}{6}$

$\frac{9}{7}$



$\frac{12}{7}$



$\frac{16}{21}$

$\frac{5}{4}$

$\frac{3}{5}$

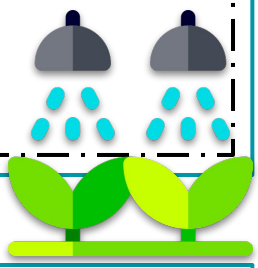
$\frac{9}{2}$

WATERING THE PLANTS

G4
Basic

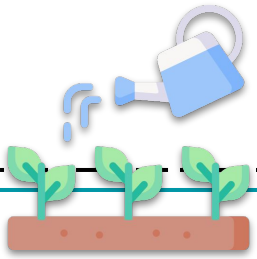
There are so many plants in the garden. Help me water the plants by answering the following word problems. Show your solution on the space provided.

1.) Sabrina plans to water the plants in her garden. If ⅔ of pale of water is need to water ¼ of the garden, how many pale of water does she need to water the whole garden.



2.) Jaya plans to sow sunflower seed in her 2 rectangular gardens. If ¼ of the garden needs ¾ kilograms of sunflower seeds, how many kilograms of sunflower seeds are needed to fill the 2 gardens.

3.) Yna is transferring flower plants from the farm to the pots. If she has ⅘ kilograms of soil and each pot needs to have ⅕ kilograms of soil, how many pots does she need?

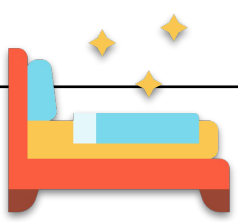


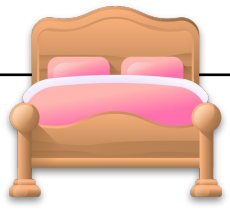
MAKING THE PERFECT BED

G5 Advanced

Your mom bought you a beautiful set of bed sheet, blanket and pillowcases. Make your bed by answering the following. Show your solution on the space provided.

PROBLEM	SOLUTION	ANSWER
1. $\frac{1}{9} \div \frac{3}{13}$		
2. $\frac{2}{10} \div \frac{7}{11}$		
3. $\frac{5}{14} \div \frac{3}{9}$		
4. $\frac{4}{9} \div \frac{4}{15}$		
5. $\frac{1}{10} \div \frac{2}{9}$		





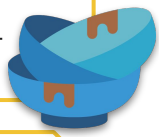
DIRTY DISHES

G5 Advanced

Learn the steps in cleaning the dirty dishes by answering the following problems. Find the quotient of the fractions on the left side. Arrange the steps by writing numbers 1-5. Show your solution on the space provided. Number 1 is done for you.

1. $\frac{10}{15} \div \frac{3}{12}$

$$\frac{10}{15} \div \frac{3}{12} = \frac{10}{15} \times \frac{12}{3} = \frac{8}{3}$$



$\frac{35}{16}$ ☐ Rinse and dry the dishes before putting it back in the storage.

2. $\frac{1}{9} \div \frac{3}{11}$

$\frac{8}{15}$ ☐ Apply the detergent solution to the utensils, glasses and plates.

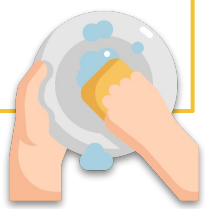
3. $\frac{1}{7} \div \frac{11}{15}$

$\frac{11}{27}$ ☐ Pre-rinse before washing.

4. $\frac{2}{10} \div \frac{3}{8}$

$\frac{8}{3}$ 1 Scrape the remaining food on the plate.

5. $\frac{7}{12} \div \frac{4}{15}$



$\frac{15}{77}$ ☐ Put sufficient detergent solution on the sponge.

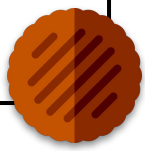
COOK FOR THE FAMILY

G5 Advanced

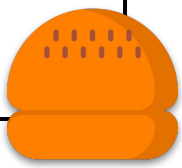
You are going to cook for the fam! You're planning to make burgers but you don't have ingredients yet. Go to the shop and buy the ingredients. To do that, find the quotient of the following proper fractions. Show your solution on the space provided.

1 $\frac{3}{13} \div \frac{2}{11}$

2 $\frac{11}{15} \div \frac{1}{10}$



3 $\frac{1}{12} \div \frac{2}{11}$



4 $\frac{5}{9} \div \frac{1}{13}$

5 $\frac{10}{13} \div \frac{3}{9}$

6 $\frac{8}{11} \div \frac{4}{9}$

FEEDING THE DOG

G5 Advanced

You are assigned to feed the dog but you can't seem to find it. Answer the following so that you can find the dog and feed him. Show your solution on the space provided.

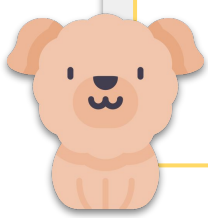
1. $\frac{11}{13} \div \frac{10}{11}$

2. $\frac{12}{15} \div \frac{13}{14}$

3. $\frac{11}{12} \div \frac{10}{13}$

4. $\frac{10}{15} \div \frac{11}{14}$

5. $\frac{7}{11} \div \frac{8}{10}$



WASHING THE CLOTHES

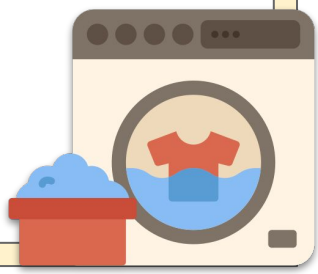
G5 Advanced

Help your mom in washing the clothes. To do that, answer the following word problems. Show your solution on the space provided.

Anna accumulates ¾ kilograms of dirty clothes in 2 days. How many kilograms she accumulates in:

1.) 6 days

2.) 12 days



Jen can hand wash ½ kilograms of clothes in ½ hour. How many kilograms of clothes can she wash in:

3.) 4 hours

4.) 10 hours

ANSWER GUIDE

Activity 1

1.) $\frac{3}{5} \div \frac{7}{8}$

$= \frac{3}{5} \times \frac{8}{7}$

$= \frac{24}{35}$ ***c***

2.) $\frac{2}{5} \div \frac{4}{9}$

$= \frac{2}{5} \times \frac{9}{4}$

$= \frac{9}{10}$ ***d***

3.) $\frac{1}{6} \div \frac{1}{3}$

$= \frac{1}{6} \times \frac{3}{1}$

$= \frac{1}{2}$ ***a***

4.) $\frac{3}{4} \div \frac{1}{8}$

$= \frac{3}{4} \times \frac{8}{1}$

$= 6$ ***e***

5.) $\frac{5}{7} \div \frac{1}{4}$

$= \frac{5}{7} \times \frac{4}{1}$

$= \frac{20}{7}$ ***b***

Activity 2

1.) $\frac{1}{2} \div \frac{3}{4}$

$= \frac{1}{2} \times \frac{4}{3}$

$= \frac{2}{3}$

2.) $\frac{3}{8} \div \frac{6}{7}$

$= \frac{3}{8} \times \frac{7}{6}$

$= \frac{7}{16}$

3.) $\frac{7}{8} \div \frac{4}{5}$

$= \frac{7}{8} \times \frac{5}{4}$

$= \frac{35}{32}$

4.) $\frac{1}{6} \div \frac{3}{8}$

$= \frac{1}{6} \times \frac{8}{3}$

$= \frac{4}{9}$

5.) $\frac{2}{3} \div \frac{1}{2}$

$= \frac{2}{3} \times \frac{2}{1}$

$= \frac{4}{3}$

Activity 3

1.) $\frac{4}{6} \div \frac{3}{4}$

$= \frac{4}{6} \times \frac{4}{3}$

$= \frac{8}{9}$

2.) $\frac{1}{2} \div \frac{2}{9}$

$= \frac{1}{2} \times \frac{9}{2}$

$= \frac{9}{4}$

3.) $\frac{1}{4} \div \frac{3}{5}$

$= \frac{1}{4} \times \frac{5}{3}$

$= \frac{5}{12}$

4.) $\frac{4}{7} \div \frac{2}{8}$

$= \frac{4}{7} \times \frac{8}{2}$

$= \frac{16}{7}$

5.) $\frac{1}{5} \div \frac{2}{7}$

$= \frac{1}{5} \times \frac{7}{2}$

$= \frac{7}{10}$

ANSWER GUIDE

Activity 4

biodegradable

1.) $\frac{3}{7} \div \frac{2}{6}$

$= \frac{3}{7} \times \frac{6}{2}$

$= \frac{\boldsymbol{9}}{\boldsymbol{7}}$

2.) $\frac{1}{5} \div \frac{1}{3}$

$= \frac{1}{5} \times \frac{3}{1}$

$= \frac{\boldsymbol{3}}{\boldsymbol{5}}$

3.) $\frac{2}{7} \div \frac{3}{8}$

$= \frac{2}{7} \times \frac{8}{3}$

$= \frac{\boldsymbol{16}}{\boldsymbol{21}}$

Non-biodegradable

4.) $\frac{5}{8} \div \frac{1}{2}$

$= \frac{5}{8} \times \frac{2}{1}$

$= \frac{\boldsymbol{5}}{\boldsymbol{4}}$

5.) $\frac{4}{7} \div \frac{2}{6}$

$= \frac{4}{7} \times \frac{6}{2}$

$= \frac{\boldsymbol{12}}{\boldsymbol{7}}$

6.) $\frac{6}{8} \div \frac{1}{6}$

$= \frac{6}{8} \times \frac{6}{1}$

$= \frac{\boldsymbol{9}}{\boldsymbol{2}}$

Activity 5

1.) $\frac{1}{\frac{1}{4}} = 1 \times \frac{4}{1} = 4$

$4 \times \frac{2}{3} = \frac{\boldsymbol{8}}{\boldsymbol{3}}$ pale of water

2.) $\frac{2}{\frac{1}{4}} = 2 \times \frac{4}{1} = 8$

$8 \times \frac{3}{4} = \frac{24}{4} =$ **6** kilograms

3.) $\frac{4}{5} \div \frac{1}{5}$

$= \frac{4}{5} \times \frac{5}{1}$

$= \frac{\boldsymbol{20}}{\boldsymbol{5}} = \boldsymbol{4}$ *pots*

ANSWER GUIDE

Activity 6

1.) $\frac{1}{9} \div \frac{3}{13}$

$= \frac{1}{9} \times \frac{13}{3}$

$= \frac{\boldsymbol{13}}{\boldsymbol{27}}$

2.) $\frac{2}{10} \div \frac{7}{11}$

$= \frac{2}{10} \times \frac{11}{7}$

$= \frac{\boldsymbol{11}}{\boldsymbol{35}}$

3.) $\frac{5}{14} \div \frac{3}{9}$

$= \frac{5}{14} \times \frac{9}{3}$

$= \frac{\boldsymbol{15}}{\boldsymbol{14}}$

4.) $\frac{4}{9} \div \frac{4}{15}$

$= \frac{4}{9} \times \frac{15}{4}$

$= \frac{\boldsymbol{5}}{\boldsymbol{3}}$

5.) $\frac{1}{10} \div \frac{2}{9}$

$= \frac{1}{10} \times \frac{9}{2}$

$= \frac{\boldsymbol{9}}{\boldsymbol{20}}$

Activity 7

1.) $\frac{10}{15} \div \frac{3}{12}$

$= \frac{10}{15} \times \frac{12}{3}$

$= \frac{\boldsymbol{40}}{\boldsymbol{13}}$

1

2.) $\frac{1}{9} \div \frac{3}{11}$

$= \frac{1}{9} \times \frac{11}{3}$

$= \frac{\boldsymbol{11}}{\boldsymbol{27}}$

2

3.) $\frac{1}{7} \div \frac{11}{15}$

$= \frac{1}{7} \times \frac{15}{11}$

$= \frac{\boldsymbol{15}}{\boldsymbol{77}}$

3

4.) $\frac{2}{10} \div \frac{3}{8}$

$= \frac{2}{10} \times \frac{8}{3}$

$= \frac{\boldsymbol{8}}{\boldsymbol{15}}$

4

5.) $\frac{7}{12} \div \frac{4}{15}$

$= \frac{7}{12} \times \frac{15}{4}$

$= \frac{\boldsymbol{35}}{\boldsymbol{16}}$

5

Activity 8

1.) $\frac{3}{13} \div \frac{2}{11}$

$= \frac{3}{13} \times \frac{11}{2}$

$= \frac{\boldsymbol{33}}{\boldsymbol{26}}$

2.) $\frac{11}{15} \div \frac{1}{10}$

$= \frac{11}{15} \times \frac{10}{1}$

$= \frac{\boldsymbol{22}}{\boldsymbol{3}}$

3.) $\frac{1}{12} \div \frac{2}{11}$

$= \frac{1}{12} \times \frac{11}{2}$

$= \frac{\boldsymbol{11}}{\boldsymbol{24}}$

4.) $\frac{5}{9} \div \frac{1}{13}$

$= \frac{5}{9} \times \frac{13}{1}$

$= \frac{\boldsymbol{65}}{\boldsymbol{9}}$

5.) $\frac{10}{13} \div \frac{3}{9}$

$= \frac{10}{13} \times \frac{9}{3}$

$= \frac{\boldsymbol{30}}{\boldsymbol{13}}$

ANSWER GUIDE

6.) $\frac{8}{11} \div \frac{4}{9}$

$= \frac{8}{11} \times \frac{9}{4}$

$= \frac{\boldsymbol{18}}{\boldsymbol{11}}$

Activity 9

1.) $\frac{11}{13} \div \frac{10}{11}$

$= \frac{11}{13} \times \frac{11}{10}$

$= \frac{\boldsymbol{121}}{\boldsymbol{130}}$

2.) $\frac{12}{15} \div \frac{13}{14}$

$= \frac{12}{15} \times \frac{14}{13}$

$= \frac{\boldsymbol{56}}{\boldsymbol{65}}$

3.) $\frac{11}{12} \div \frac{10}{13}$

$= \frac{11}{12} \times \frac{13}{10}$

$= \frac{\boldsymbol{143}}{\boldsymbol{120}}$

4.) $\frac{10}{15} \div \frac{11}{14}$

$= \frac{10}{15} \times \frac{14}{11}$

$= \frac{\boldsymbol{28}}{\boldsymbol{33}}$

5.) $\frac{7}{11} \div \frac{8}{10}$

$= \frac{7}{11} \times \frac{10}{8}$

$= \frac{\boldsymbol{35}}{\boldsymbol{44}}$

Activity 10

1.) $\frac{6}{2} = 3$

$3 \times \frac{3}{4} = \frac{9}{4}$ **kilograms**

2.) $\frac{12}{2} = 6$

$6 \times \frac{3}{4} = \frac{18}{4} = \frac{9}{2}$ **kilograms**

3.) $\frac{4}{\frac{1}{2}} = 4 \times \frac{2}{1} = 8$

$8 \times \frac{1}{2} =$ **4 kilograms**

4.) $\frac{10}{\frac{1}{2}} = 10 \times \frac{2}{1} = 20$

$20 \times \frac{1}{2} =$ **10 kilograms**

Copyright Notice

Thank you

Thank you so much for purchasing and downloading this resource.

We hope it has been useful for you in the classroom and that your students enjoy the activities.

For more teaching and homeschooling resources like this, don't forget to come back and download the new material we add every week!

Thanks for supporting **Helping With Math**. We can provide teachers with low-cost, high-quality teaching and homeschooling resources because of our loyal subscribers and hope to serve you for many years to come.

- The Entire Helping With Math Team :)